



TECHNICAL DATA SHEET

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XL[®] - 2101

SOLVENTLESS POLYESTER TRICKLE RESIN

PRODUCT DESCRIPTION

XL-2101 is a fast curing, two-part, solventless polyester resin system for high volume, automated operation and may be mixed and poured manually for short runs or motor repair. It is one of a new class of high flash point, very low VOC, solventless polyester resins. Exceptionally stable, XL-2101 contains no conventional monomers or formaldehyde releasing compounds.

FEATURES & BENEFITS

- Contains no formaldehyde, styrene, vinyl toluene, t-butyl styrene or diallyl phthalate (DAP)
- Very low weight loss on cure
- High flash-point: >200°F
- Extremely low odor
- Excellent wetting properties
- Low viscosity
- Easy processing, fast cure cycle
- Excellent, tough film and good bond strength
- UL recognized

TYPICAL APPLICATIONS

- Rotors
- Stators
- Field coils
- Armatures

TYPICAL PROPERTIES

Physical

Color/Appearance	Clear/Amber
Density @ 77°F (25°C), Lbs/gal	9.0 - 9.5
Viscosity @ 77°F (25° C), Brookfield Viscometer, cps	300 -400
Gel Time @ 212°F (100°C), minutes	6 - 9
Flash point, °F,	>200
Pot Life, catalyzed, 1% CA-2011,	days @ 77°F days @ 90°F
VOC's, Industry Modified Method, 10 gm sample, #/gal (%)	30 7
Film build, mils/side	0.1 (1.1) 1.7

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Mechanical

Bond Strength, Helical Coil Method	@ 25°C, lbs to break	26
	@150°C, lbs to break	8

Electrical

Dielectric Strength, ASTM D-115,	Dry, (volts/mil)	2750
Dielectric Strength	After 24 hours in water, (volts/mil)	
Volume Resistivity, ASTM D-257, 50% RH, 23° C	ohm-cm	1.4×10^{14}
Surface Resistivity, ASTM D-257, 50% RH, 23° C	ohms	1.2×10^{14}

DIELECTRIC CONSTANT					DISSIPATION FACTOR				
Temp, °C	25	50	100	150	Temp, °C	25	50	100	150
100 Hz	4.64	4.99	5.17	6.18	100 Hz	0.026	0.03	0.115	
1 kHz	4.13	4.79	5.07	5.27	1 kHz	0.008	0.028	0.054	0.098
10 kHz	4.15	4.87	4.89	5.05	10 kHz	0.012	0.016	0.057	0.034

Thermal Class (UL-1446)

Twisted Pair,	MW16	220
	MW28	130
	MW35	160

Refrigerant Extraction (NEMA RE-2)

R-134a, %	0.7
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APPLICATION GUIDELINES

Resin Preparation

XL-2101 must be catalyzed with 1% CA-2011 to achieve proper cure for trickle and roll-through applications. Mix thoroughly to obtain a uniform dispersion of the catalyst into the resin. Catalyze sufficient resin for 1 – 3 days usage. The catalyzed resin has a workable pot life of approximately 30 days at 25°C (77°F) or 1 week at 32°C (90°F).

APPLICATION AND CURE

1. **Trickling**
 - a. Preheat the armatures or stators to 200° – 210°F (temperature must be measured on the units)
 - b. Trickle resin onto the parts, maintaining a slow rotation.
 - c. Bake for 20-30 minutes until part temperature reaches 250° – 275°F.

2. **Roll Through**
 - a. Preheat parts to 180° – 200°F (optional)
 - b. Roll the part in the catalyzed resin.
 - c. Heat rapidly to bring the rotors to 275°F to gel the resin.
 - d. Continue baking for 30 minutes at 285° – 300°F.

EQUIPMENT RECOMMENDATIONS AND PRECAUTIONS

XL-2101 will react with copper, copper alloys and natural rubber. Therefore, do not use these materials in the tank or recirculating system. Tanks should be constructed of black iron or stainless steel and flexible fittings should be made of synthetic rubber or plastic.

STORAGE AND SHELF LIFE

The shelf life of XL-2101 is 6 months when stored at room temperature (70° F/21° C) or lower. Store in a cool, dry location. Keep away from direct sunlight and from heat sources.

ENVIRONMENTAL SAFETY

See Material Safety Data Sheet

jcd/XL2101-ds/0703

AUTHORIZED DISTRIBUTOR